priority is also discarded, and so on. By this method sufficient room is created for the incoming block of information.

[0041] Operating in this manner, the LRLFU method provides for efficient utilization of the storage space allocated for the caching of blocks of information for a given work session of a content. This is done by discarding the block with the highest discard priority, as calculated by the LRLFU method, to methodically create room for the new blocks to be cached for the ongoing work session. The blocks discarded are those least likely to be needed in the future, based on when they were last accessed and how often they have been used in prior work sessions. At completion of the work session the cache is not cleared, but the blocks of information and their corresponding priority information are retained for use with subsequent work sessions of that content. Since the cache is not cleared at the termination of the work session, the method also provides for the persistent storage of the blocks of information most likely to be needed by present or future work sessions of a given content. This results in improved performance, increased efficiency, and an enhanced user experience.

[0042] By utilizing the above method and adjusting the parameters identified and explained, improved utilization of the hard drive space available for caching can be performed.

[0043] While the invention has been particularly shown and described with reference to specific preferred embodiments, it should be understood by those skilled in the art that various changes in form and detail may be made therein without departing from the spirit and scope of the invention as defined by the appended claims.

What is claimed is:

1   1. A method for caching blocks of information for content utilized by a client computer in

2   multiple sequential work sessions, the method comprising:

3   a) caching blocks of information in allocated storage space on a hard drive of the

4   client computer;

5   b) storing, for each block of information, a first parameter corresponding to the

6   frequency at which such block of information has been accessed by the client

7   computer;

8   c) determining a discard priority value for each block of information using the

9   first parameter; and

10   d) discarding stored blocks of information from the storage space based upon their

11   discard priority value to create additional room for new blocks of information in

12   the storage space.

1   2. The method of claim 1 wherein step a) further comprises dynamically allocating

2   storage space on the hard drive of the client computer.

1   3. The method of claim 1 wherein step a) further comprises dynamically allocating

2   storage space on the hard drive of the client computer by reassigning storage space from

3   an inactive work session to an active work session.

1   4. The method of claim 1 wherein step a) further comprises dynamically allocating

2   storage space on the hard drive of the client computer by reassigning storage space from

3   an active work session to another active work session.

1   5. The method of claim 1 further comprising e) changing the size of the allocated storage

2   space for the work session.

1 6. The method of claim 1 further comprising e) reducing the size of the allocated storage
2 space for the work session by discarding blocks of information based upon their discard
3 priority value.

1 7. The method of claim 1 further comprising:

2   e) retaining cached blocks of information at the end of a work session for use in a
3   subsequent work session.

1 8. The method of claim 1 wherein step b) further comprises determining the first
2 parameter for each block of information based on at least one of the number of times the
3 block has been accessed during the current work session, the number of times the block
4 was accessed in a prior work session, or the number of times the block was accessed in a
5 plurality of prior work sessions.

1 9. The method of claim 1 wherein step b) further comprises determining the first
2 parameter for each block of information based on at least one of the number of times the
3 block has been accessed during the current work session, the number of times the block
4 was accessed in a prior work session, or the number of times the block was accessed in a
5 plurality of prior work sessions, and step c) further comprises determining the discard
6 priority value for each block of information based on at least one of the first parameter or
7 a number of access cycles of the cache since which the block of information has been
8 used.

1 10. A method for caching blocks of information on the hard drive of a client computer,
2 the method comprising:

3   a) allocating storage space on a hard drive of the client computer for each active
4   work session;

5   b) caching the blocks of information for each active work session in the allocated
6   storage space;

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7   c) storing, for each block of information, a first parameter corresponding to the

8   frequency at which each such block of information has been accessed by the

9   client computer;

10   d) determining a discard priority value for each block of information using the

11   first parameter;

12   e) discarding stored blocks of information from the storage space of each work

-13   session based upon their discard priority value, to provide additional storage space

14   for new blocks of information for each such active work session on the hard drive

15   of the client computer.

1   11. The method of claim 10 wherein step e) further comprises discarding stored blocks of

2   information from the storage space of an inactive work session.

1   12. The method of claim 10 wherein step e) further comprises discarding stored blocks of

2   information from the storage space of another active work session.

1   13. The method of claim 10 further comprising:

2   f) retaining cached blocks of information at the end of a work session for use in a

3   subsequent work session.

1   14. The method of claim 10 further comprising f) changing the size of the allocated

2   storage space for one of the active work sessions.

1   15. The method of claim 10 further comprising f) reducing the size of the allocated

2   storage space for one of the active work sessions by discarding blocks of information

3   based upon their discard priority value.

1   16. The method of claim 10 wherein step c) further comprises determining the first

2   parameter for each block of information based on at least one of the number of times the

3   block has been accessed during the current work session, the number of times the block

4   was accessed in a prior work session, or the number of times the block was accessed in a

5   plurality of prior work sessions.

1   17. The method of claim 10 wherein step c) further comprises determining the first

2   parameter for each block of information based on at least one of the number of times the

3   block has been accessed during the current work session, the number of times the block

4   was accessed in a prior work session, or the number of times the block was accessed in a

5   plurality of prior work sessions, and step d) further comprises determining the discard

6   priority value for each block of information based on at least one of the first parameter or

7   a number of access cycles of the cache since which the block of information has been

8   used.

1   18. A method for caching blocks of information for content utilized by a client computer

2   in multiple sequential work sessions, the method comprising:

3   a) caching blocks of information in allocated storage space on the client

4   computer;

5   b) storing, for each block of information, a first parameter corresponding to the

6   frequency at which such block of information has been accessed by the client

7   computer;

8   c) determining a discard priority value for each block of information using the

9   first parameter; and

10   d) discarding stored blocks of information from the storage space based upon their

11   discard priority value to create additional room for new blocks of information in

12   the storage space.

1   19. The method of claim 18 wherein step a) further comprises dynamically allocating the

2   storage space, and step b) further comprises determining the first parameter for each

3   block of information based on at least one of the number of times the block has been

4   accessed during the current work session, the number of times the block was accessed in

5   a prior work session, or the number of times the block was accessed in a plurality of prior

6   work sessions.

1   20. The method of claim 18 wherein step a) further comprises dynamically allocating the

2   storage space, step b) further comprises determining the first parameter for each block of

3   information based on at least one of the number of times the block has been accessed

4   during the current work session, the number of times the block was accessed in a prior

5   work session, or the number of times the block was accessed in a plurality of prior work

6   sessions, and step c) further comprises determining the discard priority value for each

7   block of information based on at least one of the first parameter or a number of access

8   cycles of the cache since which the block of information has been used.